

CLAIMS

1. A swash plate compressor, comprising:
 - a housing having formed therein cylinders;
 - a drive shaft rotatably supported at said housing;
 - a swash plate that is housed inside a swash plate chamber formed at said housing and rotates as one with said drive shaft; and
 - pistons that slide reciprocally inside the cylinder bore as said swash plate rotates,wherein a front-side intake chamber and a rear-side intake chamber disposed to the front and to the rear of said swash plate chamber along the axial direction, in which a working fluid to be guided into said cylinders is stored, a front-side outlet chamber and a rear-side outlet chamber disposed to the front and to the rear of said swash plate chamber along the axial direction, in which the working fluid having been compressed by said pistons is stored, a first gas passage and a second gas passage extending along the axial direction, a third gas passage formed substantially symmetrical to said first gas passage relative to a plane containing said drive shaft, a fourth gas passage formed substantially symmetrical to said second gas passage relative to the plane containing said drive shaft and communicating with said second gas passage and an external component that includes an intake port and an outlet port to be connected to piping, are all disposed at said housing;

wherein either said first gas passage or said third gas passage is made to communicate with said intake port to supply the working fluid into said front-side intake chamber and said rear-side intake chamber; and

wherein either said second gas passage or said fourth gas passage is made to communicate with said front-side outlet chamber and said rear-side outlet chamber and said second gas passage or said fourth gas passage, which is not in communication with said outlet chambers, is made to communicate with said outlet port.

2. A swash plate compressor according to claim 1,

wherein said first gas passage and said third gas passage communicate with said swash plate chamber and a front-side relay gas passage and a rear-side relay gas passage are also formed at said housing to communicate between said swash plate chamber and said front-side intake chamber and between said swash plate chamber and said rear-side intake chamber.

3. A swash plate compressor according to claim 1,

wherein said housing is constituted with a cylinder block having formed therein said cylinders, a valve plate having formed therein an intake hole and an outlet hole in correspondence to each of said cylinders and a cylinder head fixed to said cylinder block via said valve plate, which forms an intake chamber that is allowed to communicate with said intake

hole and an outlet chamber that is allowed to communicate with said outlet hole; and

wherein said valve plate constitutes part of components forming said first through fourth gas passages.

4. A swash plate compressor according to claim 3,

wherein a valve sheet having formed therein an intake valve is disposed between said cylinder block and said valve plate; and

wherein said valve sheet constitutes part of components forming said first through fourth gas passages.

5. A swash plate compressor according to claim 3,

wherein said cylinder head constitutes part of components forming said first through fourth gas passages.

6. A swash plate compressor according to claim 3,

wherein said cylinder block constitutes part of components forming said first through fourth gas passages.

7. A swash plate compressor according to claim 1,

wherein at least one of components forming said first through fourth gas passages is used commonly on a front-side and a rear-side.

8. A swash plate compressor according to claim 1,

wherein said first gas passage or said third gas passage to communicate with said intake port and said second gas passage or said fourth gas passage to communicate with said outlet port can be selected depending upon positions assumed by said intake port and said outlet port.